Percent Comp., Empirical and Molecular Formula Study Guide

Name: _____

Write the empirical formula:

- 1. Na_2SO_4
- 2. $C_6H_{12}O_6$
- 3. C₄H₁₀
- 4. KNO₂
- 5. H₂O₂

Show all work for the following problems:

6. Propene has an empirical formula of CH_2 . What is its molecular formula if it has a molar mass of 42.09 g/mol?

7. An unknown compound has 0.3911 g of carbon, 0.0654 g of hydrogen and 1.0437 g of oxygen. What is its empirical formula?

8. The molecular mass of the compound in the above question is 276.2 g/mol. What is its molecular formula?

9. Calculate the percent composition of H₂SO₄

10. A compound contains 85.65% Bi, 6.56% O, and 7.79% F. What is the empirical formula of this compound?

11. Determine the molecular formula of ethylene glycol. It has an atom ratio of one carbon to one oxygen to three hydrogen atoms. The mass of the molecule is 62.06 g/mol.

12. A compound contains 7.35 grams of chromium and 3.39 grams of oxygen. What is its empirical formula?

Answers: 1) Na ₂ SO ₄		2) CH ₂ O	3) C ₂ H ₅	4) KNO	D_2	5) HO	6) C ₃ H	I ₆
7) CH ₂ O ₂	8) C ₆ H ₁₂ O ₁₂	9) 2.06% H, 3	32.69% S, 65.2	5% O	10) BiO	OF	11) C ₂ O ₂ H ₆	12) Cr ₂ O ₃